1:Spier E-5 (1929-1932) 1933 NT15 River Yumans NT15
Maricopa

CHAPTER II

BASIS OF SUBSISTENCE

177 Since the basis of subsistence of the Maricopa and their allies
●241 has changed greatly since aboriginal days it is by no means easy to draw a picture of the original food quest. Even before white settlers appeared, Maricopa acquisition of wheat from Mexico had almost entirely displaced the cultivation of corn, and since that day dependence on traders' products has almost obliterated
[439] what remained of their original habits.

The staples of the Maricopa and of the Halchidhoma while
262 still on the Colorado seem to have been identical and used
184 in much the same proportion. There is a possibility, however, that the Halchidhoma cultivated corn somewhat more than their Gila relatives and had access to more fish. In contrast, then, they depended less on mesquite and rabbits. This must remain an inference based on what is known of other lower California peoples, since Halchidhoma informants no longer know precisely what ancestral life on the Colorado was like.

22 The Maricopa seem to have depended largely on gathering
mesquite beans, hunting jackrabbits, and on fishing. Relatively
[243] little corn was cultivated. The picture of the food quest drawn
[462] by informants shows that women were occupied every day gathering mesquite beans during the season, while the men hunted hard by for rabbits or fished. The quest was unceasing: "people starved in those days unless men and women kept at it all day long." Kutox maintained that in those days children were un-
[146] dernourished: "a child of two or more might not be able to stand because it lacked food." On the other hand, Bartlett (1852) makes it appear that Pima and Maricopa cultivation was so great as to allow long periods of inactivity.[1]

137 Yet mesquite was abundant in the valley, especially in the

[1] Bartlett, *Personal Narrative*, II, 264. [Text continues on page 50.]

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TABLE II

CALENDAR OF THE FOOD QUEST.

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		WILD PLANTS GATHERED	CULTIVATION		HUNTING AND FISHING
			Planting	Harvesting	
January...	Trees bud				
	Floods		Corn		
February...			Beans, black-eyed peas, pumpkins		
March...		Cholla beans	Watermelons		
			Cotton		Mountain sheep
April....	Rainy				Caterpillars
May.....		Berries		Beans, peas	
June.....		Crucifixion thorn berries		Corn, watermelons, pumpkins	
		Giant cactus fruit			
			Pumpkins		
			Watermelons		
July.....	Excessive heat	Mesquite	Cotton		Jackrabbits
			Beans		Fish
			Peas		
			Corn		
August....	Floods				
September.	Rainy	Opuntia fruit			
		Ironwood nuts			
October...		agwa'vâ leaves			Caterpillars
				Pumpkins	
November.				Watermelons	Deer
				Corn	
December.	Floods, excessive cold*	Wild seeds			

*The climatological conditions are those of a desert. Temperatures range between the extremes of 120°F. and 18° F., with means in January 51°, July 91°. The temperature is one or two degrees lower above Gila Bend than in the low country downstream. The growing season is 260 to 300 days in length. Variations in rainfall are extreme along the river. The annual precipitation ranges from seven to nine inches in the Casa Grande-Sacaton region down to three and less in the vicinity of Mohawk on the lower river. Rains fall mostly in January, March, and August (*Climatological Data*). Flood stages of the river, affected perhaps more by rain and melting snow along the higher tributaries, occur in March (February to April), secondarily about August and in December (Ross, *The Gila Region*, pp. 106–7). The climatic observations in the table above are those of the Indians.

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252 Occasionally a quantity was ground and stored in a pot to be eaten dry by the pinch, with a swallow of water. Sometimes the dry pods were boiled without grinding, the liquor to be added to other ground seeds. Mesquite juice was not fermented.

Screw beans, which when picked are bitter or sour, were rotted in a pit for ten days or more, until they became soft and sweet. The pit was lined above and below the beans with green arrow-weeds and the whole covered with dirt. Such pits were made near the dwelling.

222 252 A number of varieties of wild seeds were gathered, all in the same fashion by stripping the seeds from the plants with the fingers into a basket held beneath. Seed beaters were not used. None of these served for more than to give variety to the meals. The plant used more than others was ĭkse'vâ, which furnished tiny red seeds.[2] The seeds were so tiny that a large quantity was needed. They were pounded in a mortar and the chaff blown out [272] as they were shaken in a shallow basket. They were next parched and ground on a metate. Their use was principally for a drink. It was said to feel cool, so that men hunting for jackrabbits liked to drink this. Another low bush, ᵃ'tŏ'n, had tiny black seeds gathered in December. These were also prepared by pounding, parching, and grinding, and were eaten dry by pinches or mixed with water for a drink. Two other seeds were prepared differently. These were âvâa'c, a low bush,[3] and kâvâsω, a common bush three to four feet tall, both gathered in December. The seeds of the latter were tiny and black. These were pounded in the mortar, but not parched. A fire was built in a hole, the coals raked out, and the ashes soaked or damp dirt placed over them. The seeds put in the hole were covered with green leaves, followed by a layer of coals. The whole was plastered over with soaked hot ashes to retain the heat. The following morning they were ground on the metate, then mixed with water to a stiff dough [241] which was eaten raw. Another wild seed plant, ĭkca'mac, differed

[2] This was a low bush, two feet high, with sparse leaves standing out from the stem two inches apart.

[3] Possibly from âvᵃa'k, "I am walking," referring to stripping the bushes as one walked along.

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from these in that it was sometimes cultivated. This was a weed resembling tall Bermuda grass. The seeds were pounded in a mortar to remove the hulls, sprinkled with water, and ground on a metate. The meal was mixed into a dough with a little salt. It was baked in the ashes, which were later washed off, and eaten with mesquite bean soup and the like. The seeds of agwa'vâ, probably pigweed, were also eaten.

While seeds appear to have been gathered in the late fall, i.e., December, berries were gathered in May and June. A bush about four feet tall, axtŏ'tâxa'n, bore little sweet red berries. The berries were washed and thrown into hot water to boil. They cooked quickly. This was strained through a cloth, the berries mashed, and replaced in the liquor. This was used as a drink. Sometimes ground wheat (not mesquite) was cooked in this for a mush. If they wished to store the boiled berries, they were spread on a cloth in the shade, and stored in pots when thoroughly dry. Similar berries, axtŏ'tâvi' (so called because they were bitter?), were prepared in exactly the same way. Mistletoe (kamu'c) grew plentifully on the mesquite bushes. Sprigs of this were gathered, the berries stripped off and boiled to furnish a juice which was sticky but tasteless. This was used as a liquor for wheat mush. Somewhat later than these, in June, the little blueblack berries of Crucifixion thorn (? uwe') were gathered. They were mashed in a basket to make a foamy liquid which was eaten without cooking. Sometimes the berries were dried and stored: when wanted they were soaked in hot water.

A sifter (caxara'c) was used with the axtŏ't berries. This was elliptical, like those of the Pima,[4] shallow, and about a foot long. Thin willow twigs were laid transversely and longitudinally, and bound to the willow hoop.

When a young girl had gathered axtŏ't and uwe'berries for the first time, it was customary for some older woman to mash and rub them on the girl's arms so she would be industrious.

The nuts of the abundant ironwood tree were ground and leached after the fashion in which California Indians prepare acorns. By the end of the season, October, they are said to lie

[4] Russell, *Pima Indians*, p. 146.

1:Spier E-6 (1929-1932) 1933 NT15 River Yumans NT15
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gourd), which he gave to his guest. He continued plying him with liquor until he was drunk. Then he himself drank and after that furnished it to the friends of the man invited.

The song for this dance was ɣatca', "wine"; sung at no other time. "When they were drunk they thought of war." The song told of "red water," i.e., blood, and how it was made.[7] It told how the enemy had come to drink with them: they had joined in battle, now they would drink together. The intoxication and the incitement of song commonly ended in a decision to go on a raid. At the time the sahuaro was harvested, the Yavapai were camping in the mountains not far distant, not, as in winter, in isolated caves.

The drink is said to have been only mildly intoxicating. Neither the flower stalk of the mescal nor sprouted corn were used for fermented drinks, as by the White Mountain Apache.

The celebration was called ɣatca'poŭm, "water mixing" (a folk etymology?); the fruit, a'a'; the dried fruit hamă'n,[4]; its syrup, a'anyaxa' (sahuaro's water"?); the drink ɣatca' or ɣatca'csiu'm, "wine drink."

CULTIVATION

Some field crops were planted by the Maricopa: corn, beans, black-eyed peas, pumpkins, watermelons, cotton, and Ikca'mac seeds. Relatively to the lower Colorado tribes and certainly to the Pueblos, comparatively little planting was done. It is not altogether certain how much corn was cultivated since corn seems to have been almost entirely supplanted by wheat at an early date, even before whites settled in the immediate district. Even then my informants were certain that mesquite, rather than wheat, was the staple in their childhood (the middle of the last century).

The fields lay in the bottom lands of the Gila River, on flood plains subject to inundation, where planting took place immediately on the subsidence of the waters. According to native informants, the principal floods were those of December and January, with rains again in April and September.

[7] The drink is blood-red in color (Davis, *Papago Ceremony of Vikita*, p. 176), but my Maricopa informants said that ɣatca' meant neither "blood" (n,ihwi'i) nor "red water."

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ary, with rains again in April and September. They depended wholly on the inundations and on sub-surface seepage, true irrigation being unknown. Irrigation ditches first came into use, according to Kutox, only when he was a small boy (1850–55).

This late date for the introduction of ditch irrigation among the Maricopa may not be correct, although there is nothing flatly contradictory in the documentary record. An extensive system of ditches was observed by Font and Garcés among the Pima of the Casa Grande–Casa Blanca district as early as November, 1775. They describe the fields divided by fences of poles, a main ditch surrounding the whole with laterals to individual fields, and a rudimentary dam of logs and branches to raise the Gila to the ditch level. Bartlett's observations in 1852 may apply only to the Pima, although it is unlikely, or may record the Maricopa use soon after the introduction of ditches. He wrote, "The whole of this plain [occupied by the Pima and Maricopa] is intersected with irrigating canals from the Gila, by which they are enabled to control the waters, and raise the most luxuriant crops." On the other hand, inundations alone were relied on at Gila Bend (Opasoitac, the Kaveltcadom-Maricopa settlement). Font wrote, "These Opas Indians support themselves from their fields of wheat, maize, and calabashes, and apparently they do not eat so much pechita and tornillo [mesquite] as the Gileños [Pima]. Because they live near their fields, the settlement or rancherías embrace a stretch about a league long on the bank of the river. From it they do not run irrigating ditches, because from near the end of the Sierra de Comars [Sierra Estrella], near the Laguna del Hospital, the Gila river and the Assumpción [Salt River] come united; and since the channel is very wide and carries a large amount of water now, and more during the time of the floods, for then it spreads out a long distance and waters a large area of level land, by means of this irrigation they obtain their harvests." At the same time and place Garcés observed, "Here the Indians raise all sorts of grain, and regularly two crops each year, whether the season be good or bad; but apparently an acequia can be brought from the river," implying that none were in use there. The greater volume of water below the mouth of the Salt made it possible to rely on inundation alone. It may be that the Maricopa preserved this traditional type of farming for a time after moving eastward to the neighborhood of the Pima.[8]

An individual's land holdings were in a continuous strip, not in scattered patches. Only when he was living away from home temporarily, did he clear and plant a small field elsewhere. The land he occupied was of his own choosing or inherited from his father. There was no distribution by allotment, as recorded for the Pima,[9] nor had the chief any voice in the matter. "He did not

[8] Bolton, *Anza's California Expeditions*, IV, 43, 51; Coues, I, 107, 116; Bartlett, *Personal Narrative*, II, 232.

[9] Russell, *Pima Indians*, p. 82. We may suspect that this is not an aboriginal custom of the Pima, but dates, like a similar Maricopa usage, from the day when these tribes were located on their reservations.

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the land, allowing it to lie fallow for a year, provided they were able to live by gathering wild products. But if a widow had young children dependent on the crops, they would plant the season following (half a year later). On the owner's death they invited others to turn horses into his tract to clear it off as quickly as possible. If the crop was ripe the widow might tell relatives or neighbors to take it, "because while her husband was dying they had stayed night and day with her when they might have been planting for their own use." However should someone other than the male owner die, they might destroy the crops in this fashion, but usually not. This reinforces the conviction that title to the land was vested in men, but that all members of the family had some presumptive right to its use.

Two crops a year were obtained, as today by the white farmers of the Gila-Salt valleys, by planting in the early spring and again in midsummer. This biannual cropping system was coördinate with a biannual calendar, the series of month names opening with the planting of the first crop in early February and repeated with the second crop of late July or early August. Since the month names were also those of the sibs, there has derived a triple association of sib, month, and plant as totem. This does not imply that the association was historically primary with the Maricopa, since the lower Colorado tribes share it. Only one cultivated plant was so associated; corn with xavâtca'c sib, the other totem plants being wild. Xavâtca'c was the name given the lunation during which corn was planted: January–February and again July–August.

Corn was planted when the trees budded in early February, following the drying off of the floods of the preceding month which left the fields soft and moist. Pumpkins, beans, and black-eyed peas were planted at the same time, watermelons and cotton a month later. The beans and peas ripened about May, corn and watermelons in June, and pumpkins during the summer. A second crop of all these was obtained by planting again during July and the first half of August. Pumpkins and watermelons planted early in July and corn in early August would be ripe when the frost came in November. Cotton was planted in a sep-

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241 arate patch at the same time as watermelons. The Maricopa and
[171] some of the Yumans of the lower Colorado planted seeds which grew wild locally. Here ĭkca'mac, a grass seed, alone was cultivated (see above).[177]

243 824 Six varieties or colors of corn were named: light red corn (daðiʹcahwĭʹt), dark red (daðiʹcaḳaʹḳ), white (daðiʹcxamaʹl), yellow (daðiʹcâkwĕʹs), blue (daðiʹcaxavâcuʹc), light pink (daðiʹckal,ă'p), and corn with streaked kernels (daðiʹcaxuwaʹ). It was impossible to secure specimens of these, since they are said to be no longer cultivated, with the exception of a single small ear, which I am not sure was a local product. This is similar to the
[171] small ears grown by the Havasupai and known to them as Mohave corn.

243 Corn was planted in little holes scratched with a planting
[412] stick, five or six kernels together in a hole, at a depth of about six inches. It grew rapidly, pushing through the earth in three or four days. The grain was not previously prepared, as by soaking, but an old man creeping along would hold kernels in his mouth where they absorbed some moisture, but solely because he would not want to go back for seed. After the stalks came up, hills were hoed up around them with the same stick.

[614] Corn was the totem of the xavâtcaʹc sib. Hence they would
243 say, as the first kernels were planted, "You [xavâtcaʹc] are known
788 all over the world, are famous. Come up strong like that and feed everybody, so that no one will go hungry." I was also told that a man or woman of this sib would be got to repeat the formula, "Put me down in your field; bury me. I will be glad to come up."

412 The planting stick (iʹiʹxamiĭʹł or iʹiʹn,ĭmâɣwĕʹlyĭc, "stick for digging") was of cottonwood, about four feet long, two and a half inches in diameter, and flattened chiselwise for twelve inches at the lower end. It lacked the footrest of the Zuñi. My informant insisted on several occasions that they did not have the side-

[177] [177] My informants maintained that modern cultivation has wholly wiped out this plant. Kroeber (*ibid.*, p. 736) mentions four normally wild plants cultivated by the Mohave, among them akaamta which may be the same plant.

1:8pier E-6 (1929-1932) 1933 NT15 River Yumans NT15
Maricopa

252 Parched ground wheat became a common article of food in the
[484] form of gruel (the Mexican pinole). It was always carried when travelling, when it might be mixed to a dough in a cavity hollowed in the top of a barrel cactus if nothing else was available, then roasted on the coals.

251 Beans came in two varieties: a little white bean (maxi'k xama'l, "bean white") and a brown (maxi'k gwls, "bean yellow"). They were prepared alike. After being shelled they were spread on the ground for three or four days until dry, then stored
252 in the basket granary. They were boiled, not baked. Parched and ground, they were also added to ground wheat, with salt, to make a gruel. Boiled beans might be drained, then fried in a vessel having the shape of a parching pan.

241 Black-eyed peas (axma') are not aboriginal but like wheat have
177 been cultivated for a long time. Green pods were broken up like
252 our string beans and boiled. Like beans they might further be fried with fat. For storage they were broken, half-boiled in large
251 pots, spread out to dry and stored in similar vessels. Later green food might be had by boiling them further.

Pumpkins (xama't) and squash were kept in the storehouses. The rind of the pumpkin was hacked off and the seeds scooped from the interior. After these had dried on the roof overnight, the vegetable was cut spirally in long strips which dried thoroughly while hung from a beam slung under a shade. The strips were looped into bundles, fastened by a turn of one end, for
252 storage. The usual preparation was chopped bits of pumpkin boiled, with ground wheat stirred in. Pumpkins were also roasted whole, after the stem end was removed, the seeds scooped out, and this plug replaced. They warmed them, turning each side to the fire, then baking them in the ground after the coals were raked away. Pumpkin blossoms were also cooked. After boiling them, they stirred in ground mesquite beans, which had been soaked and strained, and ground wheat. Squash was also cooked like beans: pieces were dropped into plenty of fat and stirred until thoroughly amalgamated, then salt was added.

Watermelons (kwiθu'i) were known in two varieties, with pink
[171] and black seeds, as on the lower Colorado. Beside being eaten

2:Bartlett G-5 (1850-1853) 1854
NT15 River Yumans NT15

through a thick underbrush of willows, we at length reached the bank of the river, when I found the statements of the Indians too true. There were many fine large cotton-wood trees, beneath which we stopped, and which afforded us a good shade from the scorching rays of the sun; but there was not a blade of grass to be seen, and, what was worse, *the Gila was dry!* We crossed and recrossed its bed without wetting the soles of our shoes; although by digging a couple of feet, we found water for ourselves and our animals.

We now turned the animals loose to browse upon the twigs of the willows and cotton-woods, as there was no other food for them; and I sent Mr. Leroux up the stream, in search of the two great desiderata for the party, grass and water, and shade if it was to be found. In three or four hours, after making a diligent search through the bottom, he returned and reported that the river was dry as far as he had followed it, and that he had met with no grass. In fact, he was told by the Indians, that we should find no grass until we passed the Pimo villages, from twelve to fifteen miles beyond. It was so hot and dry where we were, that we did not pitch our tents, having concluded to retrace our steps in the morning to our first camp at the water-holes.

The dryness of the river was produced by the water having been turned off by the Indians to irrigate their lands, for which the whole stream seemed barely sufficient. It is probable, however, that, with more economical management, it might be made to go much further.

A party of the Coco-Maricopas remained with us

2:Bartlett G-5 (1850-1853) 1854
NT15 River Yumans NT15
Pima NV29

These people possess horses and cattle though but very few mules. I found it impossible to procure a single mule from them during my stay. They breed none, and what they obtain are such as have been lost or abandoned by passing emigrants. They plough but little, finding their hoes quite sufficient for turning up the light soil. When ploughing is resorted to, oxen alone are used. They possess a few carts and wagons, obtained from emigrants, which they use with oxen for agricultural purposes. We saw all kinds of saddles among them, from the best dragoon and Mexican saddles to the simple tree or frame. They find them on the road, where they have been thrown away by parties who have lost their animals. Those who ride bareback use a broad girth, which is passed quite loosely around the body of the horse. Into this one foot is inserted. There seemed to be numbers of horses among them, which with the cattle are left to graze near the villages during the day, and at night are brought into the corrals, or yards, for safety.

P RY 231 P RY 241 P RY 492

The only weapon used by these tribes is the bow and arrow. The short club of the Yumas and the long lance of the Apaches I never saw among them. The constant use of this weapon has rendered them excellent marksmen. Even the boys are very expert in the use of it. I have seen boys of ten or twelve years of age, strike a cent three times out of five at a distance of fifteen yards. It is quite common for them to shoot doves with their arrows, and to bring in half a dozen of these birds after a ramble among the cotton-woods. It is a favorite amusement with both men and boys to try their skill at hitting the petahaya, which presents a fine object on the plain. Numbers

P RY 411 P RY [223] P RY 526

2:Bartlett G-5 (1850-1853) 1854
NT15 River Yumans NT15
Pima NU29

dividing line between them; nor is there any distinguishing character in their villages. I consider that the arts of spinning and weaving, and of making pottery, now practised by both tribes, and in which they are equally expert, originated with the Pimos, who inherited this knowledge from their ancestors; and that from the earliest period, doubtless for centuries, they have occupied portions of the same valley where we now find them. In leaving their villages, I noticed on the edge of the plateau traces of former habitations, which had been abandoned for a great length of time.

The Coco-Maricopas took up their abode in the valley immediately adjoining the Pimos about thirty years since, from a point lower down the Gila, where they were exposed to the constant attacks of the Yumas and Apaches, which tribes, in consequence of their greater numbers, had nearly annihilated them. They came hither for protection, and formed an alliance, offensive and defensive, with the Pimos. They found the latter possessing the arts of weaving, of building more comfortable dwellings, of making better pottery, enjoying a more peaceful mode of life, than that to which they had been accustomed. These arts and habits the Maricopas gradually adopted. Their languages are totally different, so much so that I was enabled to distinguish them when spoken. The former is soft and melodious, the latter harsh and guttural. The Pimos bury their dead, while the Coco-Maricopas burn theirs. These peculiarities stamp them as distinct nations.

I have not cited the agriculture of these tribes as superior to that of all other Indians; although I may

2:Bartlett G-5 (1850-1853) 1854
NT15 River Yumans NT15
Pima Nu29

be safe in saying, that the system is more extensively and methodically practised than elsewhere. The Yumas, and other tribes on the Colorado irrigate their lands, and raise wheat, corn, melons, etc. The Moquis and the Navajos, far to the north, do the same; and the warlike Apaches, who are more nomadic in their habits than any tribe west of the Rocky Mountains, raise corn when driven to extremities. But the Pimos and Coco-Maricopas have made agriculture more of a system. Their lands are better irrigated, their crops are larger, and the flour which they make from their wheat and maize is quite as good as the Mexicans make, except in their grist-mills.

I am inclined to think that Major Emory in his Report has greatly over-estimated the number of these people. He states, that "the population of the Pimos and Coco-Maricopas together is estimated variously at from three to ten thousand, and that "the first is evidently too low."* From information obtained from the chiefs, and the Mexican officers in Sonora, I should not place them above two thousand. Captain Johnston,† another officer attached to the army under General Kearney's command, in estimating them as embracing "over two thousand souls," came very near the mark. Of the number stated by me, I was told that two thirds were Pimos.

Their complexion is a dark brown, differing from that of the red-skins east of the Rocky Mountains, and from the olive cast of the California tribes. The women have good figures, with full chests and finely

* Emory's Report, p. 86. † Johnston's Report, p. 599.

3: Whited G-5 (1890) 1894 NT15 River Yumans NT 15
Maricopa
Pima NU 29

P: 133

The Gila river has a rapid current, with a fall of from 7 to 15 feet per mile, but in many localities the banks are 20 feet in height, necessitating the erection of large stone dams in order to carry the water high enough to reach some of the best land.

P: R 162

PIMAS ON RESERVATIONS AND MARICOPAS ON SALT RIVER RESERVATION.

DETAIL	Pimas.	Maricopas.
Living on Gila River reservation	3,339	
Living on Salt River reservation	861	336
Total	4,200	335
Children under 1 year of age	204	12
Children of school age	1,025	68
Married persons in tribe	1,210	160
Wearing citizens' dress wholly	1,654	215
Wearing citizens' dress in part	1,000	160
Over 20 years of age who can read	40	
Under 20 years of age who can read	10	1
Under 20 years of age who can write English	6	1
Can use English enough for ordinary conversation	100	3
Received medical treatment during year	600	3
Mixed blood	10	
Dwellings owned by Indians	500	57
Missionaries on reservation	3	
Indians criminally punished during the year	25	
By court of Indian offenses	20	
By other methods	5	

P: ●R 231 ●241 433 434 492

PRODUCTS RAISED AND STOCK OWNED BY PIMA AND MARICOPA INDIANS IN THE YEAR 1889–1890.

PRODUCTS, ETC.	Number.	Value.
Total value of products raised		$67,100
Bushels of wheat	30,000	45,000
Bushels of oats and barley	24,000	12,000
Bushels of corn	1,000	800
Bushels of vegetables	7,500	
Melons	25,000	1,000
Pumpkins	10,000	1,000
Tons of hay cut	300	1,200
Total value of domestic animals		37,400
Horses and mules owned by Indians	2,700	30,000
Cattle owned by Indians	1,600	27,000
Domestic fowls owned by Indians	1,000	700
Swine owned by Indians	60	200
Pounds of freight transported by Indians with their own teams	60,000	
Amount earned by freighting		240
Value of products of Indian labor sold		10,000

P: R 137 313

TIMBER SUPPLY OF THE GILA AND SALT RIVER RESERVATIONS.—The principal timber is the mesquite, a [illegible], scrubby tree, more or less scattered over both reservations, but growing more plentifully in the vicinity of the rivers. The wood, when dried, furnishes nearly all the fuel used by the officials and Indians.

Cottonwood grows along the rivers and irrigating ditches, and though of inferior value for fuel, yet, on account of its rapid growth and its value as a shade for irrigating ditches, protecting the water from the direct rays of the sun and thus preventing too rapid evaporation, it is an important factor in the timber supply.

Willows are plentiful near the water courses, and are utilized by the Indians in covering their huts and in fencing for corrals. The cat's claw, a thorny shrub, is extensively used by the Indians in building their rude brush fences, and it thus serves an admirable purpose.

P: R 135

MINERAL RESOURCES.—Though the mining industry is carried on to quite an extent in various parts of the territory, producing quantities of gold, silver, and copper, it is not positively known that any deposits of

3: Whited G-5 (1890) 1894 NT15 River Yumans NT15
Maricopa
Pima NW 29

P R 135 these metals exist within the limits of the several reservations. A few adventurers claim that if the Indian title to the land could be extinguished enterprising miners would soon develop paying quantities of the precious metals, but such statements need verification.

P R 764 CUSTOMS AND RELIGION.—Should one of the tribe die, it was formerly the practice to burn the tent, hunt and kill all the animals owned by the deceased, and destroy all his property; but such practices have been abandoned within the past 15 years. Their mode of burial now is to dig a grave 5 or 6 feet in depth, then dig a vault at one side large enough to receive the body, fill the grave, and cover it with poles or brush, probably to prevent the visitation of sepulture by the coyotes. Several such Indian burying grounds may now be seen on the Gila River reservation.

P R 797 Viewed from a religious standpoint, a steady advance has been made within the past 15 years, though the progress has been slow. The Presbyterian church has erected a small adobe chapel at this agency, in which Sunday school and other services are held every week and are well attended. In addition, a small adobe chapel has been erected and partially completed at Blackwater village, about 12 miles east of the agency, but within the limits of the reservation, with a church membership of 22, about equally divided between the sexes. The Pimas have 2 church buildings, valued at $2,000.

P R 177 262 342 PROGRESS.—The material and economic progress made by the Pima and Maricopa tribes within the past 15 years is quite noticeable. Formerly all carcasses of horses and mules which fell on the great road stretching along the south bank of the Gila river, through what is now the Pima reservation, were quickly appropriated by the Indians and used as food. Their dwellings were then miserable huts, built of brush and weeds; now there are nearly 100 adobe houses, and a large number of their huts are built of willows and sticks, well plastered on the sides and roof with adobe, those among them who can do so building houses in the Mexican style. According to a count made July 1, 1890, out of 580 dwellings of all kinds 80 were adobe houses.

P R 177 648 241 The agent is encouraging improvements by issuing a new wagon to each Indian who builds a house, imposing the condition that the wagon shall be properly cared for and housed. On the fulfillment of certain other conditions he issues a plow or harrow, thus encouraging improved methods of farming. The Indians quite readily avail themselves of these opportunities, and since September 1, 1889, there have been issued 22 wagons, 12 sets of harness, 30 plows, 200 shovels, 200 hoes, 50 iron rakes, 100 axes, 100 sickles, and 40 swamp hooks. The Pimas are self-supporting, receiving no rations or annuities and no gifts from the government except farming tools, and their desire for these implements shows the progress that is being made in agriculture among them.

P R 177 291 [822] [302] In dress great progress has been made in adopting that of the whites. Probably one-half of the men wear shirts, pants, shoes, and hats; one-third go barefoot; rarely one may be seen at his cabin without covering to the legs. Some of the children wear very little clothing. The women wear no shoes in warm weather. A scanty skirt, with blouse waist, suffices for their covering, except that they wear a shawl, or a cheap substitute for one, drawn around their shoulders without folds and falling to the knees. No covering for the head is worn except when the shawl is drawn over it. Red is the prevailing color of the dress; the brighter it is the more desirable it will be. The hair is parted in the middle and combed back, and is usually worn long by both sexes, but the men have been encouraged to cut their hair short and wear hats, and efforts in this direction are meeting with some success.

P R 177 273 548 [519] [648] MORALS OF THE PIMAS AND MARICOPAS.—Drunkenness, prostitution, theft, and gambling may be classed as the prevailing vices of these Indians. According to the best authority attainable drunkenness is on the increase among the Pimas. The cause of this increase may be traced to contact with the whites, who sell them intoxicants. They manufacture a cheap fermented liquor from corn or cactus fruit and indulge in drinking at their dances; but drinking does not appear to be more common with them than among the whites, and, indeed, one has but to stand by any of the many open bars of the territory to become convinced that drinking prevails extensively among the superior race. Cases of prostitution are too common, but do not seem to be increasing. Instances of brawls and quarrels are not frequent unless some of the parties are drunk. Fifty Indian boys attending school will pursue boisterous games day after day and never engage in a quarrel or a fight. The Pimas as a tribe are peaceful, and claim that they never warred with the whites, but were obliged to take up the hatchet against their ancient enemies, the Apaches, in order to preserve their existence, and having quieted them, they returned to their peaceful avocations.

P R 164 DISEASES.—The tribe is more or less tainted with venereal diseases. The Indians are scattered over the reservation, and the agency physician attends to but a small portion of those who are sick. No reliable statistics of diseases and deaths have ever been collected, and it is impossible to determine with any great degree of accuracy the proportion of deaths resulting from the several diseases or accidents. The agency physician reports the diseases as scrofula, consumption, conjunctivitis, and syphilis. Rheumatism prevails to some extent, but owing to the mildness of the climate it is not as prevalent as among tribes farther north. Scrofulous swellings on the neck and scrofulous ulcers are often seen. One old resident thinks that from 10 to 20 per cent of the deaths are due to consumption. The physician claims that a large majority of the cases of scrofula and conjunctivitis can be traced to a syphilitic taint.

P R [755] The Indians can not be relied upon to administer medicines furnished and prescribed by the physician. A large majority of them lack faith in prescribed remedies. They prefer the singing and howling of the medicine men.

3: Whited G-5 (1890) 1894 NT15 River Yumans NT15
Maricopa
Pima NU29
Papago NU28

Pi R 58

DOMESTIC RELATIONS.—The Pimas are monogamists as well as the Mariecpas, that is to say, they have but one wife at a time; at least no case of plurality of wives has come to light; but the marriage tie is not very binding, and an Indian may marry a wife and tire of her, then marry another, and so on. The deserted wife has the privilege of marrying again, provided she can find an opportunity, and if she has children the husband must take her with all the "incumbrances" and care for them. The present agent insists that the marriage ceremony shall be performed by the minister, and such marriages are considered more binding by the Indians than those by the tribal custom.

Pi R 658

SCHOOL.—A school has been maintained on this reservation for 10 years; but a few years ago the building was burned, and from that date until September, 1890, only about 20 scholars were taught by 1 teacher. It was a boarding school, supported wholly by the government. The mission church is now used as a schoolroom, the scholars boarding in the agent's dwelling. The report of the school for the fiscal year ended June 30, 1890, is as follows:

REPORT OF THE PIMA BOARDING SCHOOL, LOCATED AT SACATON, FOR THE YEAR ENDING JUNE 30, 1890.

Number of teachers (Indian, male)	1
Number of other school employés (white, female)	3
Number who have attended at one time	28
Whole number who have attended during year	39
Females	30
Males	9
Number between 6 and 15 years of age	39
Average age of pupils (years)	13
Number of months school has been maintained	7.5
Average attendance during school term	25
Largest average attendance during any month (December)	29
Salaries of teachers and employés	$1,141.29
All other expenses	744.77
Total expense of school paid by government	$1,886.06

Industries taught: sewing, cooking, knitting, and laundry work.

Pi R 346

In the summer of 1890 new buildings were erected at a cost of $6,000, sufficient to accommodate 100 scholars, and a corps of 3 teachers commenced their work. The school was attended with success from the start, and in a short time the buildings were filled to overflowing and numbers of applicants were turned away for want of room.

Pa Pi R 142

PERSONAL APPEARANCE.—The copper color of the Apaches is not noticeable among the Pimas, the Maricopas or the Papagos. These latter are of a dark, swarthy complexion, resembling Mexicans, and might be mistaken for them except for the beard; indeed, some of these Indians have beards. The features of the Indian, however, differ greatly from the Mexican.

Pi R 133 137

APPEARANCE OF THE COUNTRY.—The "desert" is interspersed with short detached ranges of mountains, sometimes single mountains, or buttes, rising from a few hundred to 1,000 feet above the general level, rough and rocky, and usually of igneous origin. There is no vegetation on them with the exception of a few shrubs and several species of cactus, the giant variety predominating, which sometimes grows to the height of 25 feet and from 10 to 15 inches in diameter. Beaches of sagebrush chaparral are interspersed on the desert at intervals of a few feet. Near the river the shrubby mesquite grows low and branching. Along the banks of the river and the margins of the irrigating ditches cottonwood and willows flourish. The farms of the Indians are usually inclosed with brush fences, built by setting small posts in the ground a few feet apart and filling the spaces with the thorny shrub known as cat's-claw and with the limbs of the mesquite. In passing over the usually traveled roads but few grain fields can be seen, and accounts of the amount of wheat and barley grown would seem almost incredible. Great unsightly weeds are often permitted to grow by the side of the ditches, and even to cover the fields after the crop of grain is harvested.

Pi R 47 241

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REMARKS.—To learn the capabilities of the irrigated land one has but to visit that section lying on the south side of the Salt river adjoining the Salt River reservation, settled by a colony of Mormons in 1878 or 1879, now one of the most flourishing settlements in the territory. The settlers cut from three to four crops of alfalfa every year, which makes the forage crop and hay of the country. They have flourishing vineyards and peach orchards, raise figs and pomegranates, and are experimenting with oranges. Their dwellings, built of adobe or brick, look neat and comfortable, and the whole settlement wears an air of thrift and plenty. The beautiful town of Tempe, situated near the southwest corner of the reservation, seems a little Eden. Thriving farms, orchards, and gardens surround the city of Phenix.

PAPAGO RESERVATION.

Pa 131

This reservation lies about 6 miles south of the city of Tucson, in Pima county, Arizona territory, the south line being the thirty-second parallel of north latitude. The area is 70,000 acres.

4:Brown U-S (no date) 1906 NT15 River Yumans NT15
Maricopa
Pima NU29

A PIMA-MARICOPA CEREMONY

By HERBERT BROWN

RP 796 The Harvest or Corn festival of the Pima and the Maricopa Indians, known to them as *Pan-neech*, or Wild Pastime, is no longer observed by them, nor do I know that it has been observed for the last twenty-five or thirty years. Although known as a harvest festival it was indulged in on all important occasions to the extent of one or more times a year. Any event of note in tribal life was generally so celebrated — an abundant harvest; a successful raid against the Apache; the killing of any of the many predatory bands of renegade Indians which at that time infested almost all sections of the country. Whatever the occasion, the festival was the signal for a great gathering. I was told that at one time there were no fewer than 4,000 Indians present — Pima, Maricopa, and Papago. I can not now recall the reason for the celebration and my notes fail to aid me in the matter.

RP [241]

RP [574]

These celebrations invariably took place in the mesquite forest north of the old Casa Grande ruins, south of the village of Blackwater on the Gila. A circle of ground, some half an acre in extent, was cleared of underbrush and logs. A ridge of loose earth eight or ten inches high marked the exterior boundary of the circle. Near the center of the circle was a great heap of dry wood from which a fire, in the center, was kept continually burning. At a sufficient distance from the pile of wood a trench, about 8 feet long, 6 feet wide, and 4 feet deep, was dug for the accomodation of the musicians, some six in number, three of whom beat drums and three rasped the bottoms of upturned flattish baskets upon which had been spread a layer of wax, an exudation from the mesquite. This when rubbed with a bone produced a sound somewhat between a squawk and a shriek. The drums were made of cottonwood logs carefully burned out, over each end of which was stretched a piece of half-tanned deerskin. The musicians kept time to a tune that

RP [534]

/82 cont./

000 cooking pots of many sizes.

291 [177] From the Pima they also learned to weave cloth from native cotton. The dress of the women formerly consisted of a piece of this cloth wound around the body under the arms and reaching to the knees, with an outer shawl for cold weather. [302] The men wore only the breech-cloth, but painted their bodies elaborately.

262 The Maricopa, of course, possessed the same wealth of native vegetal and animal foods as the Pima, and employed the same methods of gathering and treating them. The fruit of the giant cactus, found in unlimited quantities, is still one of their important staples. This strange creation of the plant world blooms in early spring and ripens its fruit in June and July. Using a long [222] pole with a wooden blade at the end, the women cut the fruit from the plant and carry it to the settlements in large baskets. The [252] fruit is eaten fresh, dried, made into jelly, or preserved. They 273 also make quantities of wine from it, first boiling the fruit, then draining the juice into large jars, which are kept in a heated house for a week to ferment. A number of women, sometimes twenty- [476] five or more, formerly joined in making wine, and when it was [574] ready their neighbors were invited to a great feast, which always ended in a debauch. This deplorable custom, along with many of a commendable nature, was derived from the Pima.

●241 The Maricopa are a sedentary, agricultural people. The [252] principal crop of their small irrigated farms is wheat, which they [412] grind into coarse flour on the metate, or hand mealing stone.

582 /83/ The little that remains of their former social organization indicates that it was identical with that of the Mohave. Nothing could be learned tending to show that under this system marriage within recognized groups of kindred was prohibited. The union 584 was without ceremony, and formal consent of the parents was not necessary; if they did not send the young man away, it was assumed that they were willing to accept him as a son-in-law.

[764] As among other Yuman tribes, the dead are burned. Within 765 a few days after the cremation of the body of an important man a mourning ceremony, called Nyimich, is observed. Fuel is heaped up to form a pyre, on which are placed pieces of clothing of each of the near relatives of the deceased. The men march around the pyre shouting and crying, followed by the women carrying